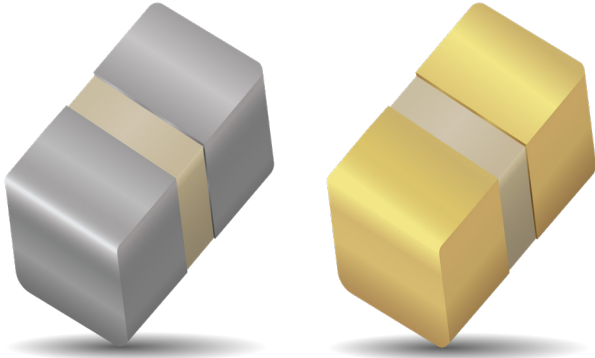


# RF/Microwave Capacitors

## RF/Microwave Multilayer Capacitors (MLC)

### 560L Series UBC™ Ultra-Broadband Capacitor



## GENERAL DESCRIPTION

KYOCERA AVX's new 560L Ultra-Broadband Capacitor is manufactured with highest quality materials to provide reliable and repeatable Ultra-Broadband performance from 16 KHz through 40+ GHz. It exhibits ultra-low insertion loss, flat frequency response and excellent return loss, and is ideal for D.C. Blocking, Coupling, Bypassing and Feedback applications requiring Ultra-Broadband performance.

The 560L is a one-piece orientation-insensitive 0402 SMT package, fully compatible with high speed automated pick-and-place manufacturing. It is designed to meet the most stringent requirements of Ultra-Broadband applications.

## ADVANTAGES

- Ultra-Broadband Performance
- Ultra-Low Insertion Loss
- Flat Frequency Response
- Excellent Return Loss
- Unit-to-Unit Performance Repeatability
- Rugged Ceramic Construction

\* 25°C, no bias applied

\*\* Operating Temperature dependent

## TYPICAL CIRCUIT APPLICATIONS

- Optoelectronics/High Speed Data
- Transimpedance Amplifiers
- (ROSA/TOSA)†
- (SONET)††
- Broadband Test Equipment
- Broadband Microwave/Millimeter Wave

† Receive and Transmit Optical Sub-Assembly

†† Synchronous Optical Network

## FEATURES

- EIA 0402 Case Size
- Capacitance: 100 nF
- Operating Frequency: 16 KHz (-3 dB roll-off) to 40+ GHz\*
- Insertion Loss: < 0.6 dB typical
- Orientation Insensitive
- One Piece Construction
- Voltage Rating: 16 WVDC\*\*
- RoHS Compliant Terminations
- Gold Terminations Available

## ELECTRICAL SPECIFICATIONS

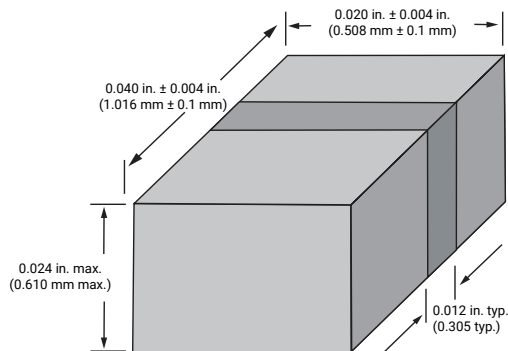
Capacitance	100 nF min.
Rated Voltage	16 WVDC from -55°C to +85°C 10 WVDC from -55°C to +125°C
Dielectric Withstanding Voltage (DWV)	250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient of Capacitance (TCC)	±15% (-55°C to +85°C) ±22% (>85°C to +125°C)
Insulation Resistance	10 <sup>10</sup> Ω min. @ +25°C @ rated WVDC 10 <sup>9</sup> Ω min. @ +125°C @ rated WVDC

## PACKAGING OPTIONS



Tape & Reel

## MECHANICAL DIMENSIONS



Архангельск (8182)63-90-72  
Астана (7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06

Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
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Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
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Омск (3812)21-46-40  
Орел (4862)44-53-42  
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Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Казахстан (772)734-952-31

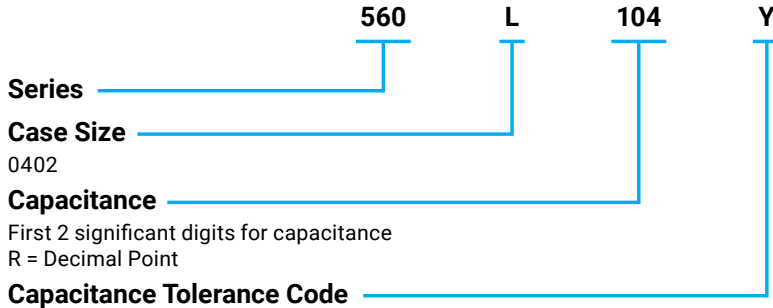
Сургут (3462)77-98-35  
Тверь (4822)63-31-35  
Томск (3822)98-41-53  
Тула (4872)74-02-29  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

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#### HOW TO ORDER



0402

First 2 significant digits for capacitance  
R = Decimal Point

Capacitance Tolerance Code

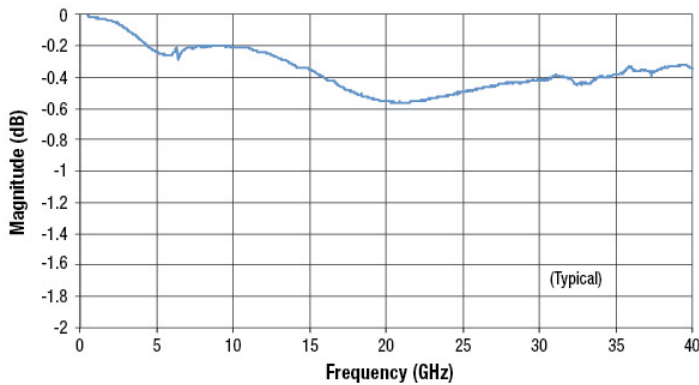
Code	Y
Tol.	+25%, -20%

\*500, 1000, 4000 pieces on 7" reel  
The above part number refers to a 560 Series (case size L) 100 nF capacitor, Y tolerance (+25%, -20%), with T termination (Tin Plated over Nickel Barrier), tape and reel packaging.

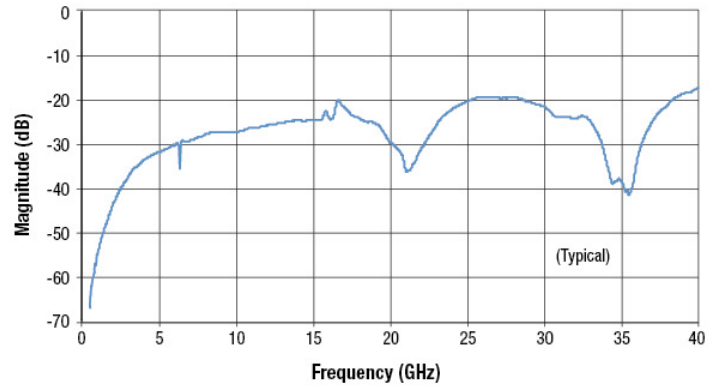


#### PERFORMANCE DATA

##### AVX 560L Series Insertion Loss (S21)



##### AVX 560L Series Return Loss (S11)



#### 560L Data Sheet Test Condition Description

All testing performed on 10-mil-thick Rogers RO4350 microstrip board, with the device under test subtending a 24 mil gap in a 22-mil-wide center trace (nominal 50-ohm characteristic impedance).

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